PETITION TO DELIST

Nomination for Delisting of a Taxon of Flora or Fauna

(Endangered Species Act 1973)

	ыты	٥f	nominator:
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Interactive Citizens United, Dr. Richard Gierak, Director

Address of nominator: 5814 Highway 96

A. . .

Telephone No. of nominator: 530 475-3212

Work

Signarule of hominator:

Date:

September 12, 2001



Statement identifying the taxon of flora or fauna including the scientific name and any common name and a description which distinguishes it from all other taxa. The statement must also indicate whether it is a vascular or non-vascular plant, vertebrate or invertebrate animal or some other form of flora or fauna.

Coho Salmon, Silver Salmon...a salmonid which is a vertebrate fish

Reasons for nominating the taxon for delisting including any reference in any scientific journal or other literature dealing with the taxon.

The following data was supplied by the Iron Gare Hatchery located in Northern California:

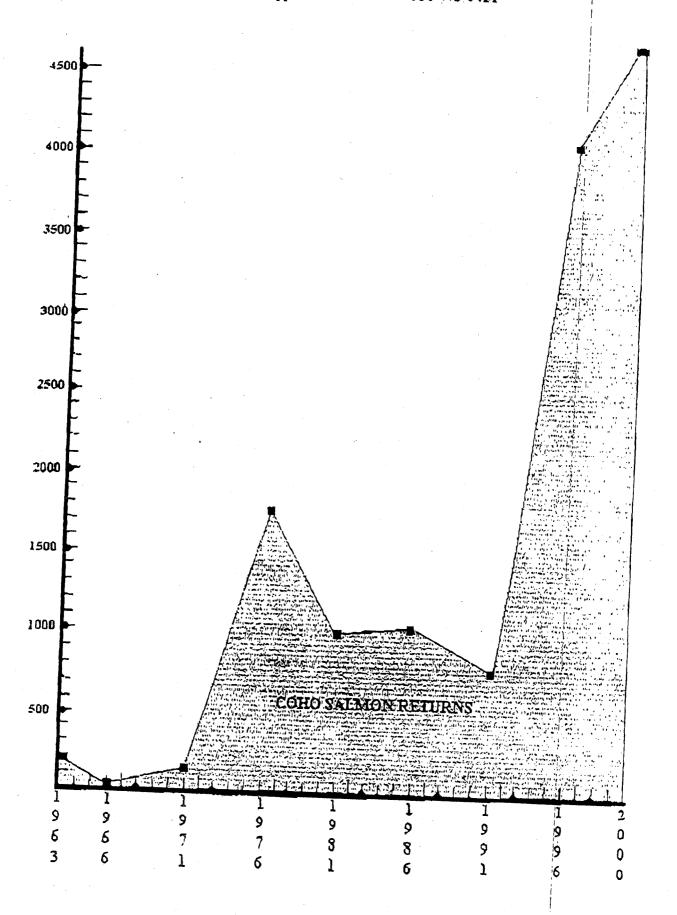
Appendix Table 3 Summary of Coho Salmon and Steelhead Trout runs :: Iron Gate Salmon & Steelhead hatchery. Iron Gate Hatchery phone number 530 475-0421

Coho Salmon	
Year	Total
1963-1964	180
1966-1967	4
1971-1972	167
1976-1977	1,757
1981-1982	997
1986-1997	1,025
1991-1992	
1996-1997	764
	4,097

Conclusion:

Based on the above data from the Iron Gate Hatchery it shows that from 1963 to 1997 there was an increase in Coho Salmon by 22.8 fold. It is apparent from these statistics that Coho Salmon in the Klamath River Basin has been on a steady increase over the last 34 years and that the listing of Coho Salmon in the Klamath River Basin has been based upon erroneous data and should be removed from the endangered or threatened listing under the Indangered Species Act. In addition to same the following data clearly indicates that National Marine Fisheries Service ignored the science that was

IRON GATE SALMON & STEELHEAD HATCHERY 1997 Data Appendix Table 3 530 475-0421



available to them and instead relied upon "junk science".

known distribution of the taxon.

Occupies the entire Pacific Coastal region. This petition specifically refers to Siskiyou County, California and the present listing of Coho Salmon as endangered under the Endangered Species Act.

Known threats which may affect the taxa.

Nature--Estuarine destruction--predation--overfishing--bycatch

Analysis: By searching government documents from 1985 through 1998 the following excerpts derived from them clearly indicates that the listing of Coho Salmon by the Endangered Species Act has no basis in Science. Primary causative factor in the decline of the Coho Salmon in Northern California Rivers can be directly attributed to Nature's whim: ie, floods, fires, Brought and El Nino causing warmer water conditions in the Pacific. The major human activities to significantly destroy the Coho Salmon population in Northern California can be attributed to the Marine Mammal's Protection Act which has allowed this predator to devastate as many as 93% of the anadromous salmonids. Removal of 66% of the viable eggs and shipping them to other fisheries in the California.

1985 LRP Ch5, pg6.Since Mt. Shasta Hatchery is on the Sacramento, which does not have cohe salmon, the cohe from this source may have been from another California stream, such as the Noyo River (Bob Corn personal communication)

1985 LRP Ch5, pg3. Iron Gate Hatchery states ".Annual goals for coho salmon call for collecting 500,000 eggs to enable rearing of 75,000 yearlings for mitigation.." Iron Gate coho were planted in the Salmon River in 1985. 450,000 and 850,000 surplus coho eggs were shipped to the Mad River Hatchery in 1986 and 1987, respectively.

1989-1990 Mid-Klamath Sub-Basin Spawning Ground Utilization Surveys indicate that prolonged drought during the past decade has been experienced in Northern California. This would certainly have a marked effect on achieving and maintaining "normal" instream flow regimes and related depth dependent water temperatures that might have a substantial impact on salmon. Predation: Both El Nino and the recent drought has been indicated as having an effect on the prey and predator species distribution. Threatened California sea lions were porking out on threatened salmon. Efforts to capture and relocate harbor seals exhibiting the same tendency have been unsuccessful in solving the problem.

The (LRP) Ch4. pages 37-39, states that estimates of mortality of anadromous salmonids from natural predators run as high as 98 percent (Fresh in Steward and Bjornn 1990) Yuroks traditionally harvested marine mammals (McEvoy 1987), but today many of these species are protected by the Marine Mammals Protection Act." In the typical logic of fisheries scientists, the report proceeds to ignore its own stated facts in favor of the politically correct.

1990-1991 According to Klamath National Forest Planner Jim Anderson, studies indicate that the largest contributions to sediment load in the Klamath Basin are from natural causes, including landslides and erosion after fire.

1991 Marine Fisheries Biologist in report to NMFS indicated floods of 1955 and 1964 on the Klamath River destroyed ripertan habitat and salmon spawning beds by depositing from 10 to 30 feet of mediment and debris.

1991 "Coho were once abundant in the lower Klamath tributaries (Snyder 1931)". The exact status of wild coho populations in the lower river today is

not known. U.S. Fish and Wildlife outmigrant studies 1990a indicate very juvenile coho are present in the smaller Klamath tributaries.

1993 Report by NMFS in their Oceanic report states that the El niro of 1983-1985 devastated the Coho Salmon population off the coast of California.

1993 Calif. Dept. of Fish & Game rep, Dennis Maria, indicated that they do not have any accurate Coho counts in the Middle Klamath for the past 20 years.

1994 FEMAT pg V-30 states: Current scientific understanding of fish habitat relationship is inadequate to allow definition of specific habitat regulrements for fish throughout their life cycle at the watershed level.

1998 It is interesting to note that although the Coho Salmon spend over 95% of their life cycle in the oceans that said oceans are not part of "critical habitat". Another important factor in this diminution of Coho salmon are the foreign fishing fleets trailing 15 to 20 mile long gill nets taking any species that happens to swim into them.

1997 NOAA Technical Memo NMFS-NWFSC-28 March 1997 Working Group Included James Lecky NMFS "In the 1994 Amendments to the MMPA, Congress directed that a scientific investigation be conducted to "determine whether Calif. sea lions and Pacific Harbor seals are having a negative impact on recovery of Salmonid Fishery stocks." "NMFS determined it did not have the resources nor was there sufficient time within a 1 year time frame" However, they reported the following: "The Calif. sea lion population has been increasing at an annual increasing at a rate of about 5% since the mid-1970's. Harbor seal population have been pacific harbor seals may now constitute an additional factor in salmonid population decline and may affect recovery of depressed salmonid population. Since passage of the MMPA in 1972 populations of Calif. sea lions and Pacific harbor seals have increased steadily in Washington, Oregon and California. These two pinniped populations are healthy and productive, and are not considered to be depressed, threatened or endangered."

1998 Report to Congress Prepared by NOAA, NMFs February 1998: pg 11 Conclusions: "California Sea Lions and Pacific Harbor Seals are abundant, increasing, and widely distributed on the West Coast. Many salmonid populations, which are declining due to a host of factors, are being preyed upon by pinnipeds." "Pinnipeds can have a significant negative impact on a salmonid population." Status of Pinnipeds pg 2: "California sea lions, for example, are now found in increasing numbers in northern waters, in inland waters, and upriver in freshwater in many West Coast systems. They are also now found near man-made structures such as dams or fish passage facilities with increasing frequency".

Dr. John Palmisano (He was a Marine mammal biologist for NMFs in Juneau, Alaska, taught fisheries and biology at U of Washington. Also an environmental scientist for a consulting firm in Bellevue, WA. (503 645-5676)) 1997: pg2. "Coastal waters from Mexico all the way to Alaska have gradually warmed since the climate shift of the 1970s and the subsequent, periodic affects of El Nino." "It is estimated that 60 - 80 percent of estuarine habitat along the Pacific Northwest has been diminished or destroyed". "It is clearly not the perceived mismanagement of inland streams and rivers that has caused the recent degradation of the salmonid population". The following quotes were obtained from the Los Angeles Times. Fri Oct. 23, 1998 by Marla Cone.

National Research Council

"It has come to our attention that the 25 member committee of the National Research Council in its report entitled, "Sustaining Marine Fisheries," has recommended immediate and substantial reductions in ocean fishing to rebuild marine coosystems throughout the world that are so severely depleted they are in danger of collapsing.

The total volume of fish being caught has reached or exceeded the maximum amount that can be sustained by the world's oceans, the scientists reported. About 84 million metric tons of fish and other seafood are caught each year in marine waters worldwide, worth about \$3.5 billion a year in the United States alone.

When it comes to individual fish stocks, 30% of the world's stocks have been overfished below the point where they can keep producing the current yield, and 44% are being fished at or near that point, according to the scientists, led by biologist Harold Mooney of Stanford University.

Terry Garcia, Assistant Secretary of Commerce

According to Assistant Secretary of Commerce, Terry Garcia, who oversees ocean issues, he said the acientists' findings confirm the warnings that the federal government has long been issuing. "The world's oceans cannot sustain" the high demand for food, said Garcia, calling it "a very serious problem."

The scientists said they had "no silver buller to offer," but advised governments in the short term to impose "substantial global reductions, in fishing capacity."

Zeke Grader of the Pacific Coast Federation of Fisherman's Assns, stated, "In some fisheries there's just too many vessels and we're going to have to figure

Warner Chabot of the West Coast chapter of the environmental group, Center for Marine Conservation has stated, "Fundamentally, we've still got too many boats chasing too few fish and political decisions preventing us from taking action on that. The fleet is much bigger and more sophisticated than the resource can accommodate." Chabot also said about 27 million tons of marine life are discarded each year. "

When you consider that some 111 metric tons of marine life are caught each year and that 27 million tons are discarded due to archaic rules and regulations it would seem logical that rather than dumping overboard millions of tons of marine life due to these regulatory statutes we should find a way to minimize the penalties and establish methods to reduce the bycatch waste. By not dumping the bycatch you could reduce the overall catch by 25% and still meet the present needs for food.

12/12/2000 Fisheries and Oceans, Canada Salmon Biology - Pacific Region COHO (Oncorhynchus kisutch)

(excerpts) Coho are swift, active fish. These salmon are found in most B.C. coastal streams and in many streams from California to Alaska, but their major territory lies between Cook Inlet, halfway up the Alask coast, to the Columbia River. Most stay from one to two years in coastal streams before emigrating seaward as smolts. But other fry are equally at home in lakes or in coastal estuaries, most coho tend to remain close to the coast

2001

TESTIMONY OF DAVID A. VOGI Before the House Committee Oversight Field Hearing Water Management a June 16 200 June 16, 2001

"Mr. Chairman a this important hearing. M this discipline for the past 1 (Fisheries) from the Univers. from Bowling Green State Un the Klamath Basin

ank you for the opportunity to testify at ப a fisheries scientist who has worked in Master of Science degree in Natural Resources .san in 1979 and a Bachelor of Science degree in Biology ancy in 1974. I previously worked in the Fishery Research and Fishery Resources Divisions of the U.S. Fish and Wildlife Service (USFWS) for 14 years and the

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## Salmon Biology - Pacific Region

Fisheries Management Pacific Region

COHO (Oncorhynchus kisutch)

SALMON HOMEPAGE

BIOLOGY AND ENVIRUNMENT

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SUCKBAE

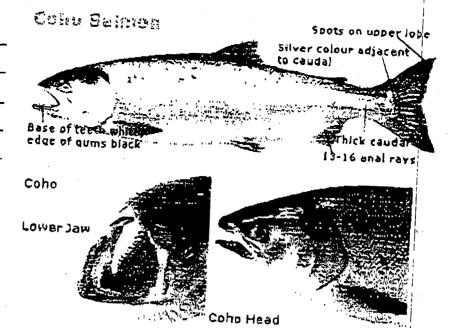
CHENOUS

LOND

PINK

ATLANTIC SALMON

BIOLOGICAL SAMPLING MANUAL



Coho are swift, active fish. These salmon are found in most B.C. coastal streams and in many streams from California to Alaska, but their major territory lies between Cook Inlet, halfway up the Alask coast, to the Columbia River (which borders the states of Washington and Oregon). When mature in the late fall, they weight up to 14 kg, although their average weight is between 2.7 and 5.4 kg.

Next to pinks, they probably have the most consistent life history of west coast salmon. Juvenile coho are highly adaptable and can have varied life histories. Most stay from one to two years in coastal streams before emigrating seaward as smolts. But other fry are equally at home in lakes or in coastal estuaries.

During early stages of growth, they have distinct pair markings (dark, vertical bars along each side), greenish brown backs, a white leading edge on the anal fin and an orange tint on all but the dorsal fin. As they develop into smolts, their pair marks

Coho Smalt

gradually fade and their backs become green with dark spots. While a number, known as jacks, return to spawn after less than one year at sea, the majority spend two growing seasons in salt water before returning to

their home stream to spawn.

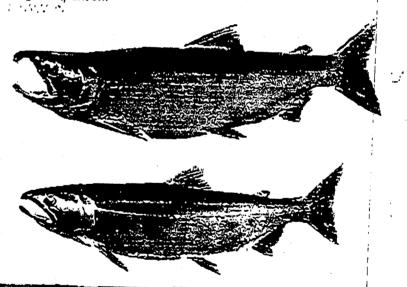
While most cono tend to remain close to the coast, they have been found as far as 1,600 km from shore. Like the pink salmon, they prefer relatively warm water, often moving south in the fall and winter months. Their first ocean year is spent feeding on sand lance, herring, insects, copepods amphipods, crab larvae and euphausids. In the second year at sea, their growth rate increases due to heavy feeding on squid, herring, sand lance and large zooplankton, taking their weight from an average 1.3 kg in March to 5.4 kg in the fall and winter when they return to their home streams to spawn,



As adults, coho have silvery sides and a metallic blue back with irregular black spots. Spawning males in fresh water may exhibit bright red on their sides, bright Spawing Male Coho green on their back and head.

with darker colouration on their belly. They also develop a marked hooked jaw with sharp teeth. Females change colour and develop hooked snouts, but the alteration is less spectacular

Spawning Comparison:



Fisheries and Oceans Canada -Pacific Region Contact Fisheries and Oceans

Important Notices and Disclaimers Questions Contact: Webritaster

Updated: 2000-12-12

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# COHO SALMON

DID YOU KNOW? The coho salmon was introduced from Pacific waters into the Great Lakes and is now abundant there.

SCIENTIFIC NAME: Oncorhynchus kisutch, from the Greek roots onkos (hook), rynchos (nose) and kisutch, the common name in Siberia and Alaska.

COMMON NAMES: Silver salmon, hook nose salmon, blueback salmon, jack salmon, salmon trout, siverside salmon and white salmon.

DESCRIPTION: The coho salmon is bluish-black with silver sides in saltwater, black spots on the back and upper part of the caudal fin. Smaller and slimmer than the chinook salmon; the inside of the mouth is gray or black with white gums. Coho salmon reach up to 38.5 inches in length and weigh up to 31 pounds; although they usually weigh between 6 to 12 pounds.

LIFE CYCLE: Spawning occurs from November to January, with the eggs hatching the following spring. Coho fity remain in streams for over a year. Moving seaward the following spring, most cohos return to spawn when they are three years old. The mature male fish which return after two years are known as "jacks" and in Oregon and Washington, the abundance of "jacks" are used to predict the next year's three year old return.

HABITAT AND ECOLOGY: Coho salmon utilize freshwater, nearshore and offshore environments during its lifecycles. Coho salmon spawn in the same environment as chinook salmon; however, coho prefer lower stream velocity, shallower water and smaller gravel. Most coho fry stay in the stream for over a year feeding on aquatic insects, zooplankton and small fish. Adequate stream cover is important to fry survival, as is high dissolved oxygen levels. Mortality is especially high during freshwater lifestages, often a result of poor forest and agricultural management practices that lead to siltation, which may ruin spawning beds or smother the eggs. Migrating coho salmon also face physical obstacles and high water temperatures resulting from dams, inadequate water flows due to diversions for irrigation and impoundment of water for power generation. Once reaching the estuaries, coho salmon fall prey to a number of other species and may be impacted by human changes, such as shoreline development, residential drainage and the filling of marine wetlands. The time spent in this habitat is critical to the development of the species and their ability to survive in the offshore environment

RANGE: Coho salmon spawn in coastal streams from Northern Japan to the Anadyr River in Siberia and from Monterey Bay in California and Point Hope in Alaska. This species can also be found in the ocean from Baja, California, to the Bering Sea in Alaska. Major U.S. spawning grounds are in Alaska, Washington and Oregon.

ECONOMIC VALUE: The fourth most abundant salmon species, cohe salmon is a culturally and economically important resource, and an important subsistence fish. Coho salmon is commercially fished from Northern California north to Norton Sound in Alaska; 75% of the total U.S. catch comes from Alaska.

National Marine Fisheries Service (NMFS) for one year. During my tenure with the federal government, I received numerous superior and outstanding achievement awards and commendations, including Fisheries Management Biologist of the Year Award for six western states. For the last 10 years I have worked as a consulting fisheries scientist on a variety of projects on behalf of federal, state, and county governments, Indian tribes, and numerous other public and private groups. During the past decade, I have advised the Klamath Water Users Association (KWUA) on Klamath River basin fishery resource issues. I was the principal author of the 1993 "Initial Ecosystem Restoration Plan for the Upper Klamath River Basin" and was one of the primary contributing authors to the Upper Basin Amendment to the Klamath River fishery restoration program. I was a principal contributor of information for the 1992 Biological Assessment on Long-Term Operations of the Klamath Project. More recently, I was a contributor to technical portions of the March 2001 document, "Protecting the Beneficial Uses of Waters of Upper Klamath Lake: A Plan to Accelerate Recovery of the Lost River and Shormose Suckers". This plan was also authored by Dr. Alex Home and I have attached his March 21, 2001 testimony before the Senate Subcommittee on Water and Power. I have performed research projects on coho salmon and the endangered suckers, as well as many other species.

Today, I am providing your Committee with important information concerning the science, or more aptly stated, lack of rigorous science, behind the artificially created regulatory crisis that has been imposed on the Upper Klamath basin. These topics relate to the sucker fish, which the USFWS has focused on to regulate higher-than-normal lake elevations in Upper Klamath Lake, and coho salmon, which NMFS has focused on to demand higher-than-normal flows below Iron Gate Dam on the Klamath River. And lastly, I am providing your Committee with recommendations to avoid the regulatory crisis that has been created in the Klamath Basin.

#### Decision-Making Process

In my entire professional career, I have never been involved in a decision-making process that was as closed, segregated, and poor as we now have in the Klamath basin. The constructive science-based processes I have been involved in elsewhere have involved an honest and open dialogue among people having scientific expertise. Hypotheses are developed, then rigorously tested against empirical evidence.

None of those elements of good science characterize the decision-making process for the Klamath Project. At one time, several years ago, the agencies would interact with all interests who had expertise or a stake in the decisions. Recently, my role has been to receive completed analyses (usually without supporting data) and mail in comments. Often, the timeline is such that it is virtually impossible to comment and certainly impossible for the agencies to consider the comments objectively and meaningfully. The overriding sense I have is that the goal is to dismiss what we have to offer. A scientist that I work with has had the experience of being invited to a technical meeting, then literally turned away. Additionally, we have been invited to attend recent meetings related to downstream flow studies, but our presence was requested at the end of the process, after key assumptions had been developed.

I provide examples below of the kinds of information that have not, in my opinion, received objective consideration or open discussion. I also include alternative actions and recommendations.

Klamath Coho Salmon

In my opinion, the National Marine Fisheries Service (NMFS) significantly and inappropriately added to the regulatory crisis in the Klamath Basin by calling for higher-than-normal releases from Iron Gate Dam under the auspices of protecting the coho salmon, a "threatened" species, from extinction.

Primary Factors Affecting Coho are in the Tributaries, Not the Mainstern Coho salmon, as a species, prefer smaller tributary habitats, as compared to larger mainstern river habitats. This extremely important biological fact was not incorporated into the rationale NMFS used to assess Klamath Project effects on coho. Fry and juvenile coho normally occupy 6 small shallow streams where there are more structurally complex habitats (e.g., woody debris) than are found in larger, mainstream river systems; this fact is amply described in the scientific literature. NMFS ignored the fact that proportionally and numerically only small numbers of fry use the reach most affected by the Klamath Project as compared to the entire basin. NMFS has notably failed to reconcile this critical piece of biologically relevant information. NMFS avoided using an excellent source of information that would demonstrate this fact. A 1985 U.S.

Department of Interior document entitled: "Klamath River Basin: Fisheries Resource Plan" thoroughly describes and graphically shows the distribution of coho in the Klamath Basin. That voluminous, peer-reviewed document clearly demonstrates that the upper Klamath River in proportion to the entire Klamath River basin, is a geographically minor area of coho presence. This fact is evident from the attached Figure 2 adapted from the Klamath River Basin Restoration Plan. Instead of acknowledging this indisputable information, NMFS has singularly focused on demanding dramatically increased, higher-than-historical flows from Iron Gate Dam to "protect" coho from extinction. In so doing, NMFS has inappropriately suggested that coho habitats should somehow be re-created in the large river channel downstream of Iron Gate Dam to serve as a surrogate for the lost or degraded habitats in Klamath basin tributaries. This misguided, scientifically deficient approach is unlikely to succeed.

I thoroughly reviewed thousands of pages of documents in detail to determine whether the available scientific data and information suggest that the recent historical flow regime in the mainstern Klamath River below Iron Gate has been a significant factor affecting Klamath River fishery resources. These documents included scientific peer-reviewed literature, state and federal agency documents and reports, and investigations encompassing many decades of research on the Klamath River. This extensive review revealed that numerous factors other than the recent historical mainstem flow regime at Iron Gate Dam are overwhelmingly documented to have affected Klamath River fishery resources. There are many other documented factors that have affected salmon runs in the Klamath River, I compiled a comprehensive listing of those factors in March 1997 and provided that list to NMFS. None of the documents I have reviewed provided any supporting scientific information or data suggesting that the historical mainstern flow regime at Iron Gate Dam is a significant factor adversely affecting coho salmon. To the contrary, the available information provides compelling evidence that other factors are far more important in affecting fish populations than the recent historical Iron Gate Dam flow regime. It is particularly noteworthy that the multi-million dollar, multi-agency Long-Range Plan for restoring Klamath River anadromous fish (the principal document guiding salmon restoration in the basin) addresses the issue of Iron Gate Dam releases and potential effects on salmonids in an almost passing manner (Klamath River Basin Fisheries Task Force 1991). Nearly the entire discussion in the Long-Range Plan on the topic of salmon production focuses on the tributaries in the lower Basin. This is instructive because, despite all the efforts and research accomplished to date on the Klamath River, no entity has developed any scientific data to support the premise that specific Iron Gate releases over the past several decades has been a significant factor limiting Klamath River salmonids.

Probably the strongest indicator demonstrating that the recent historical Iron Gate Dain flow regime is not a primary factor affecting lower Klameth River fish is the response of the fish populations. There are no apparent cause-and-effect relationships between historical flow levels at Iron Gate Dam and resulting production of coho salmon. Clearly, there are other well documented factors that have an influence on the Klamath River salmon runs than the flow regime alone (e.g., harvest, hatchery production, tributary habitats). The following are highly relevant facts ignored by NMFS in the agency's Biological Opinion:

- Fry rearing habitat in the upper mainstern Klamath River is not as quantitatively or qualitatively important to the species as is rearing habitat in the Klamath River tributaries.

· Numerically and proportionally, very small numbers of coho fry rear in the mainstem downstream of Iron Gate Dam in the reach most influenced by the Klamath Project.

• The indirect effects of variable Iron Gate flow on adult coho populations in the Klamath basin are minuscule when compared to other direct factors such as incidental ocean harvest and other

NMFS relied on a closed process to formulate the agency's recommendations for Klamath River instream flows. Individuals involved with this process purposefully excluded scientific experts that could have provided meaningful input to the process. This exclusionary process is contrary to scientific and procedural processes employed elsewhere in the United States, particularly in California.

In summary, sound scientific bases for the NMFS Biological Opinion are lacking. NMFS relied on an incorrectly applied and incomplete computer modeling exercise to support the agency's conclusions of the effects of the Klamath Project operations on coho. A close examination of the NMFS Biological Opinion demonstrates that it does not empirically describe how Klamath Project operations affect coho populations in the Klamath River basin. Instead, the agency's action resulted in too much warm water dumped in the wrong place at the wrong time and for all the wrong reasons. The purported biological benefits to coho salmon will not be

The Need for Alternatives using a Pro-Active, Adaptive Management Approach Implement Meaningful Restoration Actions

New data and analyses indicate that regulatory measures and some research implemented over the past decade, although perhaps well intended, misdirected resources away from other more beneficial actions. Also, unfortunately, to the extent recovery or restoration efforts have been undertaken over the past 13 years since the listing, they have not been effective. The USFWS has contended that maintaining high reservoir elevations is the only feasible short-term measure that can be implemented to benefit the sucker populations; this is incorrect. Alternatives are available to benefit the species/ecosystem and have been presented to the agency. These alternatives could have prevented the crisis we are in today,

There are fundamental changes that have occurred in Upper Klamath Lake that cannot be ignored. As an example, the fact that non-native fish were introduced into the lake and are now proliferating is a change that is absolute. Such changes have permanently altered the ecosystem. Despite the emotional rhetoric one may hear about "Nature healing herself", there is no turning back to a so-called "pristine" ecosystem. These non-native fish prey on and compete with suckers and will never be extirpated from the lake. However, there are numerous on-the-ground actions

that could be undertaken to improve the existing situation and provide greater flexibility and balance for resource management. The Upper Klamath Basin is in a situation where millions of dollars have been spent on "ecosystem restoration" (primarily land acquisition) under the auspices of sucker recovery; unfortunately, the site-specific linkages to sucker recovery are highly debatable and unclear. These benefits have not been forthcoming. It is time to take a new approach.

Several recovery projects first identified in the early 1990s hold promise for increasing the sucker populations. To this end, the KWUA recently developed a document entitled "Protecting the Beneficial Uses of Waters of Upper Klamath Lake: A Plan to Accelerate Recovery of the Lost River and Shormose Suckers" (Plan) to promote timely implementation of biologically innovative action-, and results-oriented restoration projects. This Plan was presented to the Senate Subcommittee on Water and Power in March 2001. Some of the projects in the Plan are embodied in the 1993 USFWS Sucker Recovery Plan, but have not been pursued. The Plan focuses on implementation of specific actions to accelerate the recovery of the endangered suckers while minimizing conflicts among competing uses for common resources. This Plan's use of cooperative efforts between local interests and those individuals and groups sharing common goals is considered preferable to traditional fragmented plans which result in tragic conflicts for limited resources we are seeing in the basin today. The Plan recommends actions such as improving access of suckers in the Sprague River to physical and water quality improvement projects in Upper Klamath Lake.

As with the suckers in the Upper Klamath Basin, there are viable alternatives and opportunities to increase coho populations in the Lower Klamath Basin, particularly in the tributaries. However, until NMFS changes its singular and misdirected focus on higher-than-historical flows from Iron Gate Dam, restoration opportunities using the agency's approach are unlikely to succeed. Unfortunately, whatever the existing lower basin programs may have accomplished to date, fishery restoration does not appear to be one of them. Although many millions of dollars have been spent on the lower basin programs, benefits to fish have not been evident. A new strategy of embracing a more holistic watershed approach and cooperative partnerships in the tributaries, instead of the traditional adversarial approach is needed. Implement Independent Peer Review

Many of the mistakes made by the USFWS and NMFS during this year could have been avoided through a proper peer review of the agencies' actions. It is imperative that the peer review not be a facade of "like-minded" individuals or agencies promoting or protecting their policies or positions. To prevent the flawed process that occurred this year, it will be necessary to ensure that a peer review be performed by individuals without a vested interest in the suckers and coho remaining listed species under the ESA; to do otherwise undermines the integrity of the scientific process. For example, it is clearly inappropriate to have so-called peer review by some stakeholders demanding water rights, including high lake levels. Likewise, researchers dependent on the ESA controversy for funding may have a clear conflict with objective review. Individuals that would use the threatened or endangered status as "leverage" to promote their positions should also be excluded from the process. Additionally, the peer review should be a "blind" review process to allow reviewers to be anonymous; this will ensure that "peer pressure", instead of peer review, does not occur. The peer review of the agencies' Biological Opinions should be performed outside the Departments of Interior and Commerce to avoid the problems we have observed in the Klamath basin crisis. Data must be examined with clear, scientific

9. 2774 NIT. 14/2/2014

objectivity using widely accepted scientific principles. To be objective, agency policies and positions do not belong in this scientific process. Good science will lead to good policy. And, if the agencies are willing to do so, there is a great opportunity to accomplish restoration goals without doing the kind of harm that is being experienced now."

#### References

CH2M Hill. 1985. Klamath River Basin fisheries resource plan. For U.S. Department of the Interior.

Kier, William M., Associates. 1991. Long range plan for the Klamath River Basin conservation area fishery restoration program. The Klamath River Basin Fisheries Task Force.

Markle, D., L. Grober-Dunsmoor, B. Hayes, and J. Kelly. 1999. Comparisons of habitats and fish communities between Upper Klamath Lake and lower Klamath reservoirs.

Abstract in The Third Klamath Basin Watershed Restoration and Research Conference. March 1999.

U.S. Fish and Wildlife Service. 1988. Final Rule: Endangered and Threatened Wildlife and Plants;

2 ODFW estimates made by applying relative catch per unit of effort to previous population estimates (Fortune 1986).

3 U.S. Bureau of Reclamation. 2001. Biological Assessment for the Klamath Project.

Taxon: means a group or rank into which organisms are categorised, (in this case usually refers to species and sub-species).

Applicants may supply any additional information which may support their case which will be considered by the Scientific Advisory Committee (SAC).

Nominators will have receipt of their nomination acknowledged prior to consideration and will be notified of a preliminary recommendation following consideration by the SAC.

Nominations to be forwarded to:

U.S. Department of the Interior U.S. Fish and Wildlife Service National Marine Fisheries Service 1649 C Street, N.W. Washington, D.C. 20240 (202) 208-3100

Acceptable Use Policy

Sent: Thursday, September 13, 2001 2:51 PM
Subject: Fwd: Coho Delisted
9-13-2001
John Griffith
Confirmed by Brian Gorman, NMFS, Seattle.
2:02 p.m.

On Monday, Sept. 10, Judge Michael Hogan, in U.S. district Court in Eugene, ruled that NMFS was arbitrary and capricious in listing the Oregon coastal coho on the Endangered Species Act list.

In a case brought by the Alsea Valley Alliance and Mark Schl against NMFS and the Secretary of Commerce, plaintiffs argued that NMFS acted arbitrarily and capriciously in failing to separate hatchery and coho coho in its listing.

"This is big," Gorman told me. "As of right now, there is no listing of Oregon coastal coho."

NMFS has not fully considered and studied Hogan's listing yet. Gorman did not know what his agency s next step will be.

He had received no media calls yet.



UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration NATIONAL MARINE PEHBRIES SERVICE

Northwest Pisheries Science Center Coastal Zone & Estuarine Studies Division 2725 Montlake Boulevard East Seattle, Washington 98112-2097

September 27, 1996

MEMORANDUM FOR:

F/NW - William Stelle, Jr. P/SW - Wilda Diaz-Soltero

PROM:

F/NWC - Usha Varanasi F/SWC - Michael Tillman Murles

SUBJECT:

Scientific Disagreement Regarding Coho Salmon

· Status under the ESA

The following is a summary of issues of scientific disagreement related to the three coho salmon BSUs that have been proposed for listing under the Endangered Species Act (ESA). Sources for the information discussed below include public and peer-review comments received on the listing proposal and discussions and work products of the Science Team for Oregon's Coastal Salmon Restoration Initiative (CSRI).

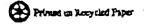
Issues of scientific disagreement for specific ESUs

#### Oregon Coast BSU

+ ODFW and a peer reviewer argued that failure by the National Marine Fisheries Service (MMTS) to consider the same types of data for Oregon and Washington coastal cobo salmon blased our risk analysis toward finding relatively high risk for Oregon Esus. Specifically, they objected to our identification of declines in recruits-per-spawner as a significant risk factor for the Oregon coastal ESU, when that index was not avaluated for the Olympic Peninsula or Puget Sound BSUs. A peer reviewer stated that results of his analyses showed declines in recruits-per-spawner for the Olympic Peningula ESU similar to those observed in Oregon.

Comment: The peer reviewer's analyses for the Olympic Peninsula were based on more recent data than we considered. We have now obtained the information becessary to update trends in recruits-per-spawner for Oregon and Washington coastal coho salmon and will be performing the necessary analyses over the next month.

Oregon Coast and Southern Gregon/Northern California PSUs





* The Oregon Department of Pish and Wildlife (ODFW) reviewed the status of Oregon coho salmon from these BSUs under its state ESA and concluded that a listing was not warranted. This disagrees with the conclusion MMFS reached under the federal

Comment: The Offw conclusion relied beavily on assumptions regarding future effects of management actions and improvements in ocean productivity. As explained below, a rick workshop to be held in November 1996 will consider scientific disagreements about how to evaluate the importance of natural environmental fluctuations.

* ODFW and a peer reviewer argued that NMFS overstated the risk to wild Oragon coho salmon from hatchery fish because of misinterpretation or insufficient understanding of the data ODFW also argued that the state analysis used to obtain the data used by EMFS is problematical in some populations and can lead to an upward bias in the estimated fraction of hatchery fish spawning naturally. They also argued that we did not adequately consider that a) hatchery fish spawn earlier than wild fish, thus limiting potential interactions, b) naturally spawning hatchery fish have reduced reproductive success compared to wild fish, and c) significant hatchery strays are confined to a small portion of the entire ESU.

Comment: We have spent considerable time examining each of these points. In general, we don't find that the data (which for the most part were collected by ODFW biologists) support their arguments. Over the last few months, we have compiled detailed summaries of ODFW data on hatchery stock transfers, scale pattern analysis, and run timing and presented them to ODFW for review for completeness and accuracy. We are awaiting their review and comment on this information. According to ODFW, this review has been slowed by heavy demands for the same staff in the CSRI process. We therefore do not expect to have a detailed reply from them until at least Movember. It is essential to reach agreement on what the data are before drawing conclusions about risk from this important factor.

The reproductive success of naturally spawning hatchery fish is a key uncertainty in most evaluations. In general, it is difficult to obtain empirical information without fairly complex studies. However, in the late-August draft of the CSRI report, ODEN included a new analysis of abundance data for the Yaquina basis that they used to draw inferences about the reproductive success of naturally spawning hatchery fish coastwide. They concluded that the evidence suggests this success was very low. If true, this would help to alleviate some concerns regarding stray hatchery fish. However, we have not had time to review this new

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study in any detail or to determine how generally applicable its results might be. Furthermore, if the poor reproductive success of naturally spawning hatchery has a genetic basis, then whatever matings with wild fish do occur could seriously reduce fitness of natural populations. Careful evaluation of these results and their implications will take at least a month to complete.

population simulation models aimed at addressing risk of extinction for the Oregon Coast ESU. Two of these models were developed by Ssience Team members as part of the CSRI process; these models have been discussed and refined since the draft OCSRI plan in late August. The two models use different approaches and different assumptions, and their results so far are not consistent. We have been told that ODFW is submitting the models and their results for peer reliably be used for making listing decisions. It is likely that Teviewers will have substantial comments and expected to take at least 2 months.

The third modeling effort is through a contract by ODFW to Dr. Michael Lynch, a world-recognized expert in the fields of evolutionary and conservation biology from the University of Oregon. Dr. Lynch's model differs from the other two in that it will incorporate genetic as well as demographic risks. Preliminary results from his model are expected some time in November. We have scheduled a meeting with Dr. Lynch on October 10 to review technical aspects of his model.

Although these applications of the model will deal with data for Oregon populations, the results of the models could have significant implications for risk analysis of coho salmon populations coastwide

Comment: These models have the potential to provide data that is directly relevant to determining whether an ESA species is "in danger of extinction throughout all or a significant portion of its range" (i.e., endangered) or "likely to become an endangered species within the foreseeable future" (i.e., threatened). A six-month extension would allow adequate time to fully consider the disparity in preliminary model results, thus greatly enhancing the prospects of obtaining the most reliable data on extinction risk for the ESUs proposed for listing.

* ODFW, the Oregon Department of Porestry, and the California Resources Agency disagreed with the listing proposal because they believed, existing, recent, and/or future conservation

measures were not adequately considered. The California Resources Agency also contended that an extension would provide the opportunity to more fully evaluate the benefits of these measures.

Comment: We understand that these issues are being considered by the Northwest and Southwest Regional office.

### Northern California and Central California Coast PSU

The key data underlying the risk analysis for the California portion of the Southern Oregon/Northern California ESU and the Central California ESU are: 1) presence-absence data in streams with historical records of coho salmon, and 2) abundance estimates of native and hatchery influenced fish. Both sets of data are limited, particularly the abundance estimates which are based on very crude estimation methods, and this has resulted in some disagreement about the status of coho salmon in California and the risks faced by these populations. For example, the status of coho salmon in the numerous small streams throughout this ESU is largely unknown.

In response to the paucity of real data, NMTS is resurveying streams to gather new presence-absence information, first in the Central California ESU (this work is nearly completed) and next in the California portion of the Southern Oregon/Morthern California 250. The new observations of coho salmon presence/absence obtained by NMFS in the Central California ESO show higher frequency of presence than the Brown and Moyle data used in the 1995 Status Review. including the presence of coho in some streams with no historical record. The State of California Resources Agency recently provided NMPS with new information from commercial timber companies which are consistent with NMTS recent observations. The Resources Agency contends that this new information, and more information which is expected to become available over the next six months, will indicate that coho salmon are more abundant and widely distributed than was previously thought, and that this information should be considered in any final listing decision. NMTs is also developing new methodologies to estimate coastal salmonid abundance on a regional basis.

The state of California has initiated two efforts that address the factors affecting coho salmon: 1) the California Salmon Initiative, and 2) the Southern Coho Restoration Team. Both of these efforts have scientific components that will independently assess the risk level to coho salmon in the Central California ESU. In addition, we have been told that we can expect additional information on California coho salmon from the California Department of Fish and Game by the end of September. Depending on the extent and nature of the new data, it may take

several weeks or more to review and incorporate into the comprehensive analyses.

Because empirical data on coho salmon in this ESU are so sketchy, substantial uncertainties remain about most aspects of the risk

### Habitat information

For all ESUs, there are also substantial uncertainties and, in some cases, scientific disagreement about how best to incorporate habitat information into risk analyses and how to evaluate the effectiveness of conservation measures. Unfortunately, there is little prospect of making substantial progress toward resolving any of these issues within the next few months.

### General issues of scientific disagraement

The following three issues have been important considerations for our salmon risk analyses for several years but have never been resolved to everyone's satisfaction. NMPs has organized a workshop on risk analysis that will deal with these and other key issues. Although it is not realistic to expect that the upcoming risk analysis workshop will fully resolve all these issues. NMFs should be in a much better position after the workshop to determine whether the basic risk analysis approach it has been using is appropriate and, if not, how best to modify it.

### Lack of explicit listing criteria

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Some scientists have complained that NMPS has not articulated explicit, objective criteria that can be used to determine whether listings are warranted. In the absence of such criteria, it is possible for different groups of scientists to come to different conclusions about listing status based on the same data.

We have considered this criticism but do not see a way at present to establish criteria that would be applicable to all ESUs of all salmonid species. Purthermore, we are not aware of a quantitative way to incorporate all the risk factors we believe

The workshop will take place November 13-15 in Seattle. It will involve a panel of 12 scientists with expertise in various aspects of extinction risk analysis. The panelists will also make a series of presentations, and they are under contract to provide written summaries of their talks by the time of the workshop. A separate contract has been let with a rapporteur/editor, who will oversee final preparation of the written report of the workshop, with publication expected by the end of January 1997.

are important to consider. Instead, our risk analyses use a qualitative evaluation of various quantitative or semi-quantitative components. The result is that the analyses rely heavily on professional judgement, which is not enricely satisfying but we believe is preferable to adopting strictly quantitative criteria that would necessarily fail to incorporate important considerations.

This disagreement thus involves the basic framework for the entire risk analysis process. After the risk analysis workshop, we should have a better idea whether a more quantitative approach is feasible.

#### Diversity within RSUs

some scientists have argued that once ESUs are defined, they should be considered essentially homogeneous units, and the only ESA issue is whether the entire unit is at risk of extinction or endangerment. These scientists have criticized NMFS' concerns for conserving diversity within ESUs, pointing out that salmon ESUs already are only "distinct population sagments" of biological species, so diversity of the species is insured if all ESUs are maintained.

Although we agree that the process of identifying successively finer units for conservation can be taken too far, it is not the case that most (or even very many) salmon BSUs are homogeneous. If we wanted ESUs to meet this criterion, there would be a very large number (at least hundreds) for each salmon species. Most salmon ESUs we have identified incorporate substantial geographic areas, a variety of life history types (e.g., summer and winter steelhead), and, presumably, considerable genetic diversity. Furthermore, according to the ESA, a "distinct population sagment" is a "species" that is eligible for the same level of protection as biological species and subspecies. This means that an ESU can be listed if it is threatened or endangered "throughout all or a significant portion of its range."

The key scientific disagreement thus focusses on the most appropriate biological interpretation of the phrase "significant portion of its range" with respect to ESUs. In spite of the legal definition, populations or groups of populations (such as most ESUs) are qualitatively different than biological species. Does a "significant portion of the range" of an ESU have a different biological meaning than it does for a taxonomic species? If so, what factors should be considered in evaluating the importance of diversity within ESUs? Again, this topic will be considered at the November risk analysis workshop.

This issue is applicable to most ESUs of most species, but is particularly so for the transboundary cobo salmon ESU, which is dominated by populations in the Rogue and Klamath Rivere.

#### Natural environmental variability

Even pristine salmon populations are prone to large fluctuations in abundance. Furthermore, there is growing evidence for decadal-scale cycles in ocean productivity regimes that can strongly affect abundance of populations over a large geographic area. Some scientists believe that MMTS has not adequately accounted for these natural sources of variability in its salmonid risk analyses, particularly for coho salmon and steelhead. Some argue that even if no further conservation measures are taken, many populations that are presently considered at risk will rebound naturally when ocean productivity improves. For example, ODFW has concluded that declines in ocean productivity have been the most important factor in the decline of coastal Oregon coho salmon. The State of California's Resources Agency has contended that the relative importance of this and other factors responsible for the decline of coho salmon. are unknown.

We have recognized these sources of variability in our risk analyses, but it must be kept in mind that the ESA allows listing of species that are at risk because of natural as well as human factors. Unfortunately, the baseline for identifying "cycles" in environmental factors is very short in evolutionary time scales, and there is no guarantee that current "hard times" will turn around any time soon. The key is to ensure that ESA "species" are healthy enough to survive the hard times with the added pressure of human-induced mortality, as they presumably have in the past when only natural factors were involved.

This source of scientific disagreement substantially affects risk analysis for all three coho salmon 250s proposed for listing.

#### Summary

We have been working diligently since the listing proposal (July 1995) to resolve scientific issues related to the coho salmon ESUS that were proposed for listing or identified for candidate spacies status. Since May of this year, this has involved intense efforts working with the Science Team for Oregon's CSRI process. Much progress has been made, but we are only just now at a point where we can review and summarize all the new information for consideration by the Biological Review Team. Furthermore, scientific disagreements about some key types of data (especially data related to extinction risk analyses and the effects of hatchery fish) will not be resolved for an additional 1-3 months. Finally, it would be very unfortunate if NMFS were forced to make a final listing determination before the results of the risk analysis workshop could be carefully reviewed and incorporated.